In the Claims

For the convenience of the Examiner, all pending claims are set forth below. No amendments have been made.

1. A system for optimizing a request-promise workflow, the system comprising one or more software components associated with a second entity and embodied in computer-readable media and when executed operable to:

establish a demand at the second entity for one or more supplies supplied by a first entity operable to:

produce the supplies; and

optimize its production of the supplies using a request for the supplies as a constraint to generate a promise for the supplies;

optimize its production of the demand to generate a request for the supplies;

communicate the request to the first entity;

receive a promise for the supplies from the first entity based on the request, the promise having been generated according to an optimization of production of the supplies using the request as a constraint, the promise identifying a culprit as a cause for the promise not satisfying the request if the promise does not satisfy the request;

generate a constraint according to the culprit; and

reoptimize its production of the demand using the constraint generated according to the culprit to generate a new request if the promise does not satisfy the request.

2. The system of Claim 1, wherein the first entity is operable to repeat the following until the promise satisfies the request:

receiving a request for the supplies from the second entity;

reoptimizing its production of the supplies using the request for the supplies as a constraint to generate a promise; and

communicating the promise to the second entity.

3. The system of Claim 1, further operable to repeat the following until the promise satisfies the request:

optimizing its production of the demand to generate a request for the supplies;

communicating the request to the first entity;

receiving a promise for the supplies from the first entity based on the request, the promise having been generated according to an optimization of production of the supplies using the request as a constraint, the promise identifying a culprit as a cause for the promise not satisfying the request if the promise does not satisfy the request;

generating a constraint according to the culprit; and

reoptimizing its production of the demand using the constraint generated according to the culprit to generate a new request if the promise does not satisfy the request.

4. The system of Claim 1, wherein:

the first entity is further operable to optimize its production of the supplies independently of the second entity; and

the second entity is further operable to optimize its production of the demand independently of the first entity.

5. The system of Claim 1, wherein:

the request comprises a first request for a first supply and a second request for a second supply; and

the promise comprises a first promise for the first supply and a second promise for the second supply, the promise identifying the second supply as the culprit if the promise does not satisfy the request.

6. The system of Claim 5, wherein:

the second promise does not satisfy the second request, the promise identifying the second supply as the culprit; and

the second entity is further operable to optimize its production of the demand to generate a new request using the second promise for the second supply to generate the constraint.

7. The system of Claim 1, wherein:

the request comprises a bundled request for at least two supplies to produce the demand;

the promise in response to the bundled request comprises a first promise, a second promise, and the culprit identifying the second promise as the cause for the promise not satisfying the bundled request; and

the second entity is operable to reoptimize its production to generate a new request using the second promise to generate the constraint.

8. The system of Claim 1, wherein:

the promise comprises an optimization objective and a promise constraint; and

the second entity is operable to reoptimize its production to generate a new request using the promise constraint and the optimization objective.

9. The system of Claim 1, wherein the second entity is operable to generate a request in accordance with one or more internal resources.

10. The system of Claim 1, wherein the second entity is operable to communicate a demand promise to a client if the promise satisfies the request.

11. A method for optimizing a request-promise workflow, the method comprising:

establishing a demand associated with one or more supplies needed to satisfy the demand;

assuming that the supplies are unlimited;

optimizing the production of the demand to generate a request for the supplies needed to satisfy the demand;

communicating the request to a supplier;

receiving a promise from the supplier, the promise having been generated according to an optimization of production of the supplies using the request as a constraint, the promise identifying a culprit as a cause for the promise not satisfying the request if the promise does not satisfy the request;

determining whether the promise satisfies the request; and

if the promise does not satisfy the request, generating a constraint according to the culprit and reoptimizing the production of the demand using the constraint generated according to the culprit to generate a new request for communication to the supplier.

12. The method of Claim 11, further comprising repeating the following until the promise satisfies the request:

optimizing the production of the demand to generate a request for the supplies needed to satisfy the demand;

communicating the request to the supplier;

receiving a promise from the supplier, the promise identifying a culprit as a cause for the promise not satisfying the request if the promise does not satisfy the request;

determining whether the promise satisfies the request; and

if the promise does not satisfy the request, generating a constraint according to the culprit and reoptimizing the production of the demand in accordance with the constraint to generate a new request for communication to the supplier.

13. The method of Claim 11, wherein:

the request comprises a first request for a first supply and a second request for a second supply; and

the promise comprises a first promise for the first supply and a second promise for the second supply, the promise identifying the second supply as the culprit if the promise does not satisfy the request.

14. The method of Claim 13, wherein:

the second promise does not satisfy the second request, the promise identifying the second supply as the culprit; and

reoptimizing the production of the demand to generate a new request further comprises using the second promise for the second supply to generate the constraint.

15. The method of Claim 11, wherein:

the request comprises a bundled request comprising a first request for a first supply and a second request for a second supply; and

the promise comprises a first promise, a second promise, and the culprit identifying the second promise as the cause for not satisfying the bundled request.

16. The method of Claim 15, wherein reoptimizing the production of the demand to generate a new request further comprises using the second promise for the second supply to generate the constraint.

17. The method of Claim 15, wherein the bundled request comprises the supplies required for one demand.

18. The method of Claim 11, wherein:

the promise comprises an optimization objective and a promise constraint; and

reoptimizing the production of the demand to generate a new request further comprises reoptimizing using the promise constraint and the optimization objective.

19. The method of Claim 11, wherein:

optimizing the production of the demand to generate a request for the supplies needed to satisfy the demand further comprises generating the request in accordance with one or more internal resources; and

reoptimizing the production of the demand to generate a new request further comprises generating the new request in accordance with the one or more internal resources.

20. The method of Claim 11, wherein determining whether the promise satisfies the request comprises determining whether the promise falls within an acceptable range.

21. The method of Claim 11, further comprising communicating a demand promise to a client if the promise satisfies the request.

22. A method for optimizing a request-promise workflow, the method comprising:

establishing a demand associated with one or more supplies needed to satisfy the demand;

assuming that the supplies are unlimited;

optimizing the production of the demand to generate a first request for a first supply and a second request for a second supply needed to satisfy the demand;

communicating the first request to a first supplier;

communicating the second request to a second supplier;

receiving a first promise for the first supply from the first supplier, the first promise identifying a first culprit as a cause for the first promise not satisfying the first request if the first promise does not satisfy the first request;

receiving a second promise for the second supply from the second supplier, the second promise identifying a second culprit as a cause for the second promise not satisfying the second request if the second promise does not satisfy the second request;

determining whether the first promise satisfies the first request;

determining whether the second promise satisfies the second request; and

if the first promise does not satisfy the first request or the second promise does not satisfy the second request, generating a constraint according to the first culprit or the second culprit, respectively, and reoptimizing the production of the demand in accordance with the constraint to generate a new first request and a new second request.

23. The method of Claim 22, further comprising repeating the following until the first promise satisfies the first request and the second promise satisfies the second request:

optimizing the production of the demand to generate a first request for a first supply and a second request for a second supply needed to satisfy the demand;

communicating the first request to the first supplier;

communicating the second request to the second supplier;

receiving a first promise for the first supply from the first supplier, the first promise identifying a first culprit as a cause for the first promise not satisfying the first request if the first promise does not satisfy the first request;

receiving a second promise for the second supply from the second supplier, the second promise identifying a second culprit as a cause for the second promise not satisfying the second request if the second promise does not satisfy the second request;

determining whether the first promise satisfies the first request;

determining whether the second promise satisfies the second request; and

if the first promise does not satisfy the first request or the second promise does not satisfy the second request, generating a constraint according to the first culprit or the second culprit, respectively, and reoptimizing the production of the demand in accordance with the constraint to generate a new first request and a new second request.

24. The method of Claim 22, wherein:

the second promise does not satisfy the second request, the second promise identifying the second culprit; and

reoptimizing the production of the demand to generate a new first request and a new second request further comprises using the second promise to generate the constraint.

25. The method of Claim 22, wherein the request comprises a bundled request for one or more supplies required for one demand.

26. The method of Claim 25, wherein the request further comprises a sub-bundled request for the supplies supplied by the first supplier.

27. The method of Claim 26, further comprising:

receiving a first promise for the first supply from the first supplier, the first promise comprising the first culprit identifying a culprit promise that does not satisfy the sub-bundled request; and

reoptimizing the production of the demand to generate a new first request and a new second request using the culprit promise to generate the constraint.

28. The method of Claim 26, further comprising:

receiving a first promise for the first supply from the first supplier, the first promise comprising a first culprit promise that does not satisfy a first sub-bundled request;

receiving a second promise for the second supply from the second supplier, the second promise comprising a second culprit promise that does not satisfy a second sub-bundled request, the second sub-bundled promise being larger than the first sub-bundled promise;

reoptimizing the production of the demand to generate a new first request and a new second request using the first culprit promise to generate the constraint.

29. The method of Claim 22, wherein:

the first promise comprises an optimization objective and a promise constraint; and

reoptimizing the production of the demand to generate a new first request and a new second request further comprises reoptimizing using the promise constraint and the optimization objective.

30. The method of Claim 22, wherein:

optimizing the production of the demand to generate a first request for a first supply and a second request for a second supply needed to satisfy the demand further comprises generating the first request in accordance with one or more internal resources; and

reoptimizing the production of the demand to generate a new first request and a new second request further comprises generating the new first request and a new second request in accordance with the one or more internal resources.

31. The method of Claim 22, wherein determining whether the first promise satisfies the first request comprises determining whether the first promise falls within an acceptable range.

32. The method of Claim 22, further comprising communicating a demand promise to a client if the first promise satisfies the first request and the second promise satisfies the second request.

33. A system for optimizing a request-promise workflow, the system comprising one or more software components embodied in computer-readable media and when executed operable to:

establish a demand associated with one or more supplies needed to satisfy the demand;

assume that the supplies are unlimited;

optimize production of the demand to generate a first request for a first supply and a second request for a second supply needed to satisfy the demand;

communicate the first request to a first supplier;

communicate the second request to a second supplier;

receive a first promise for the first supply from the first supplier, the first promise identifying a first culprit as a cause for the first promise not satisfying the first request if the first promise does not satisfy the first request;

receive a second promise for the second supply from the second supplier, the second promise identifying a second culprit as a cause for the second promise not satisfying the second request if the second promise does not satisfy the second request;

determine whether the first promise satisfies the first request;

determine whether the second promise satisfies the second request; and

if the first promise does not satisfy the first request or the second promise does not satisfy the second request, generate a constraint according to the first culprit or the second culprit, respectively, and reoptimize the production of the demand in accordance with the constraint to generate a new first request and a new second request.

34. The system of Claim 33, operable to repeat the following until the first promise satisfies the first request and the second promise satisfies the second request:

optimizing production of the demand to generate a first request for a first supply and a second request for a second supply needed to satisfy the demand;

communicating the first request to the first supplier;

communicating the second request to the second supplier;

receiving a first promise for the first supply from the first supplier, the first promise identifying a first culprit as a cause for the first promise not satisfying the first request if the first promise does not satisfy the first request;

receiving a second promise for the second supply from the second supplier, the second promise identifying a second culprit as a cause for the second promise not satisfying the second request if the second promise does not satisfy the second request;

determining whether the first promise satisfies the first request;

determining whether the second promise satisfies the second request; and

if the first promise does not satisfy the first request or the second promise does not satisfy the second request, generating a constraint according to the first culprit or the second culprit, respectively, and reoptimizing the production of the demand in accordance with the constraint to generate a new first request and a new second request.

35. The system of Claim 33, wherein:

the second promise does not satisfy the second request, the second promise identifying the second culprit; and

reoptimizing the production of the demand to generate a new first request and a new second request further comprises using the second promise to generate the constraint.

36. The system of Claim 33, wherein the request comprises a bundled request for one or more supplies required for one demand.

37. The system of Claim 36, wherein the request further comprises a sub-bundled request for the supplies supplied by the first supplier.

38. The system of Claim 37, further operable to:

receive a first promise for the first supply from the first supplier, the first promise comprising the first culprit identifying a culprit promise that does not satisfy the sub-bundled request; and

reoptimize the production of the demand to generate a new first request and a new second request using the culprit promise to generate the constraint.

39. The system of Claim 37, further operable to:

receive a first promise for the first supply from the first supplier, the first promise comprising a first culprit promise that does not satisfy a first sub-bundled request;

receive a second promise for the second supply from the second supplier, the second promise comprising a second culprit promise that does not satisfy a second sub-bundled request, the second sub-bundled promise being larger than the first sub-bundled promise;

reoptimize the production of the demand to generate a new first request and a new second request using the first culprit promise to generate the constraint.

40. The system of Claim 33, further operable to reoptimize production of the demand to generate a new first request and a new second request by reoptimizing using a promise constraint and an optimization objective, the first promise comprising the optimization objective and the promise constraint.

41. The system of Claim 33, further operable to:

optimize the production of the demand to generate a first request for a first supply and a second request for a second supply needed to satisfy the demand by generating the first request in accordance with one or more internal resources; and

reoptimize the production of the demand to generate a new first request and a new second request by generating the new first request and a new second request in accordance with the one or more internal resources.

42. The system of Claim 33, further operable to determine whether the first promise satisfies the first request by determining whether the first promise falls within an acceptable range.

43. The system of Claim 33, further operable to communicate a demand promise to a client if the first promise satisfies the first request and the second promise satisfies the second request.

44. Software for optimizing a request-promise workflow, the software embodied in computer-readable media and when executed operable to:

establish a demand associated with one or more supplies needed to satisfy the demand;

assume that the supplies are unlimited;

optimize production of the demand to generate a request for the supplies needed to satisfy the demand;

communicate the request to a supplier;

receive a promise from the supplier, the promise identifying a culprit as a cause for the promise not satisfying the request if the promise does not satisfy the request;

determine whether the promise satisfies the request; and

if the promise does not satisfy the request, generate a constraint according to the culprit and reoptimize the production of the demand using the constraint generated according to the culprit to generate a new request for communication to the supplier.

45. Software for optimizing a request-promise workflow, the software embodied in computer-readable media and when executed operable to:

establish a demand associated with one or more supplies needed to satisfy the demand;

assume that the supplies are unlimited;

optimize production of the demand to generate a first request for a first supply and a second request for a second supply needed to satisfy the demand;

communicate the first request to a first supplier;

communicate the second request to a second supplier;

receive a first promise for the first supply from the first supplier, the first promise identifying a first culprit as a cause for the first promise not satisfying the first request if the first promise does not satisfy the first request;

receive a second promise for the second supply from the second supplier, the second promise identifying a second culprit as a cause for the second promise not satisfying the second request if the second promise does not satisfy the second request;

determine whether the first promise satisfies the first request;

determine whether the second promise satisfies the second request; and

if the first promise does not satisfy the first request or the second promise does not satisfy the second request, generate a constraint according to the first culprit or the second culprit, respectively, and reoptimize the production of the demand in accordance with the constraint to generate a new first request and a new second request.

46. A system for optimizing a request-promise workflow, the method comprising:

means for establishing a demand associated with one or more supplies needed to satisfy the demand;

means for assuming that the supplies are unlimited;

means for optimizing the production of the demand to generate a request for the supplies needed to satisfy the demand;

means for communicating the request to a supplier;

means for receiving a promise from the supplier, the promise identifying a culprit as a cause for the promise not satisfying the request if the promise does not satisfy the request;

means for determining whether the promise satisfies the request; and

if the promise does not satisfy the request, means for generating a constraint according to the culprit and reoptimizing the production of the demand using the constraint generated according to the constraint to generate a new request for communication to the supplier.

47. A method for optimizing a request-promise workflow, the method comprising:

establishing a demand associated with one or more supplies needed to satisfy the demand;

assuming that the supplies are unlimited;

repeating the following until the promise satisfies the request:

optimizing the production of the demand to generate a request for the supplies needed to satisfy the demand, the request comprising a first request for a first supply and a second request for a second supply;

communicating the request to a supplier;

receiving a promise from the supplier, the promise comprises a first promise for the first supply and a second promise for the second supply, the promise identifying a culprit comprising the second supply as a cause for the promise not satisfying the request if the promise does not satisfy the request, the promise comprising an optimization objective and a promise constraint;

determining whether the promise satisfies the request; and

if the promise does not satisfy the request, generating a constraint according to the culprit and reoptimizing the production of the demand in accordance with the constraint, the promise constraint, and the optimization objective to generate a new request for communication to the supplier.